

What is claimed is:

1. A method of mapping status messages of monitored objects to service elements in an IT-infrastructure-management system, the service elements and their dependencies being represented by an element graph having directed links between service elements, thereby defining higher-level and lower-level service elements, the method comprising:

directing a status message to at least one higher-level service element;
ascertaining, at the higher-level service element, whether the status message pertains to a lower-level service element connected with the higher-level service element;
downwardly propagating of the status message to said lower-level service element in response to a positive outcome in said ascertaining.

2. The method of claim 1, wherein, before the status message is directed to the at least one higher-level service element, the status message is analyzed, and attributes are added to the status message related to information contained in the status message, wherein said ascertaining is performed on the basis of the attributes associated with the status message.

3. The method of claim 1, wherein at least some of the service elements are logical service elements.

4. The method of claim 1, wherein an edge condition is associated with a link connecting the at least one higher-level service element with a lower-level service element, and wherein the edge condition is tested in said ascertaining.

5. The method of claim 1, wherein a node condition is associated with the at least one higher-level service element, and wherein the node condition is tested in said ascertaining.

1
2 6. The method of claim 1, wherein lower-level service elements are ar-
3 ranged in more than one hierarchical level, and wherein the actions of ascer-
4 taining and downwardly propagating are repeatedly carried out downwardly
5 from level to level.

6
7 7. The method of claim 6, wherein, in said ascertaining, for a service
8 element on a higher hierarchical-level, at least one condition is tested for each
9 service element on a lower hierarchical-level connected with the service ele-
10 ment on the higher hierarchical-level, and wherein the downward propagation
11 of the status message is terminated if no condition for propagating the status
12 message to a service element on the lower hierarchical-level is fulfilled.

13
14 8. The method of claim 1, wherein the element graph is able to be ex-
15 tended by adding further service elements without a necessity to adapt the
16 status messages of the monitored objects to the service elements added.

17
18 9. A method of mapping status messages of monitored objects to serv-
19 ice elements in an IT-infrastructure-management system, the service elements
20 and their dependencies being represented by an element graph having di-
21 rected links between service elements, thereby defining higher-level and
22 lower-level service elements, the method comprising:

23 analyzing a status message of a monitored object, and adding attributes
24 to the status message related to information contained in the status message;

25 directing the status message to at least one higher-level service element;

26 ascertaining, at the higher-level service element, on the basis of at least
27 one of the attributes, whether the status message pertains to a lower-level
28 service element connected with the higher-level service element;

29 downwardly propagating of the status message to said lower-level serv-
30 ice element in response to a positive outcome in said ascertaining.

31
32 10. The method of claim 9, wherein at least some of the service ele-

1 ments are logical service elements.

2
3 11. The method of claim 9, wherein an edge condition is associated with
4 a link connecting the at least one higher-level service element with a lower-
5 level service element, and wherein, in said ascertaining, it is tested, using at
6 least one of the attributes, whether the edge condition is fulfilled.

7
8 12. The method of claim 9, wherein a node condition is associated with
9 the at least one higher-level service element, and wherein, in said ascertain-
10 ing, it is tested, using at least one of the attributes, whether the node condi-
11 tion is fulfilled.

12
13 13. The method of claim 9, wherein lower-level service elements are ar-
14 ranged in more than one hierarchical level, and wherein the actions of ascer-
15 taining and downwardly propagating are repeatedly carried out downwardly
16 from level to level.

17
18 14. The method of claim 13, wherein, in said ascertaining, for a service
19 element on a higher hierarchical-level, at least one condition is tested for each
20 service element on a lower hierarchical-level connected with the service ele-
21 ment on the higher hierarchical-level, and wherein the downward propagation
22 of the status message is terminated if no condition for propagating the status
23 message to a service element on the lower hierarchical-level is fulfilled.

24
25 15. The method of claim 9, wherein the element graph is able to be ex-
26 tended by adding further service elements without a necessity to adapt the
27 status messages of the monitored objects to the service elements added.

28
29 16. An IT-infrastructure-management server arranged to map status
30 messages of monitored objects of the IT infrastructure to service elements
31 which are represented in the server in an element graph having directed
32 links connecting service elements, thereby defining higher-level and lower-

1 level service elements, the server being programmed to:

2 direct a status message to at least one higher-level service element;

3 ascertain, at the higher-level service element, whether the status mes-
4 sage pertains to a lower-level service element connected with the higher-level
5 service element;

6 propagate downwardly the status message to said lower-level service
7 element in response to a positive outcome in said ascertaining.

8
9 17. An IT-infrastructure-management server arranged to map status
10 messages of monitored objects of the IT infrastructure to service elements

11 which are represented in the server in an element graph having directed
12 links connecting service elements, thereby defining higher-level and lower-
13 level service elements, the server being programmed to:

14 analyze a status message of a monitored object, and add attributes to
15 the status message related to information contained in the status message,

16 direct the status message to at least one higher-level service element;

17 ascertain, at the higher-level service element, on the basis of at least
18 one of the attributes, whether the status message pertains to a lower-level
19 service element connected with the higher-level service element;

20 propagate downwardly the status message to said lower-level service
21 element in response to a positive outcome in said ascertaining.

22
23 18. A computer program product comprising a machine-readable me-
24 dium with program code stored on it, for carrying out a method, when exe-
25 cuted on a computer system, of mapping status messages of monitored ob-
26 jects to service elements in an IT-infrastructure-management system, the
27 service elements and their dependencies being represented by an element
28 graph having directed links between service elements, thereby defining
29 higher-level and lower-level service elements, the program code being ar-
30 ranged to:

31 direct a status message to at least one higher-level service element;

32 ascertain, at the higher-level service element, whether the status mes-

sage pertains to a lower-level service element connected with the higher-level service element;

downwardly propagating the status message to said lower-level service element in response to a positive outcome in said ascertaining.

19. A computer program product comprising a machine-readable medium with program code stored on it, for carrying out a method, when executed on a computer system, of mapping status messages of monitored objects to service elements in an IT-infrastructure-management system, the service elements and their dependencies being represented by an element graph having directed links between service elements, thereby defining higher-level and lower-level service elements, the program code being arranged to:

analyze a status message of a monitored object, and add attributes to the status message related to information contained in the status message,

direct the status message to at least one higher-level service element;

ascertain, at the higher-level service element, on the basis of at least one of the attributes, whether the status message pertains to a lower-level service element connected with the higher-level service element;

propagate downwardly the status message to said lower-level service element in response to a positive outcome in said ascertaining.

20. A propagated signal carried on an electromagnetic waveform comprising a representation of program code for carrying out a method, when executed on a computer system, of mapping status messages of monitored objects to service elements in an IT-infrastructure-management system, the service elements and their dependencies being represented by an element graph having directed links between service elements, thereby defining higher-level and lower-level service elements, the program code being arranged to:

direct a status message to at least one higher-level service element;

ascertain, at the higher-level service element, whether the status mes-

1 sage pertains to a lower-level service element connected with the higher-level
2 service element;

3 downwardly propagating the status message to said lower-level service
4 element in response to a positive outcome in said ascertaining.

5
6 21. A propagated signal carried on an electromagnetic waveform com-
7 prising a representation of program code for carrying out a method, when
8 executed on a computer system, of mapping status messages of monitored
9 objects to service elements in an IT-infrastructure-management system, the
10 service elements and their dependencies being represented by an element
11 graph having directed links between service elements, thereby defining
12 higher-level and lower-level service elements, the program code being ar-
13 ranged to:

14 analyze a status message of a monitored object, and add attributes to
15 the status message related to information contained in the status message,

16 direct the status message to at least one higher-level service element;

17 ascertain, at the higher-level service element, on the basis of at least
18 one of the attributes, whether the status message pertains to a lower-level
19 service element connected with the higher-level service element;

20 propagate downwardly the status message to said lower-level service
21 element in response to a positive outcome in said ascertaining.